

1. couple magnetic beads (●) to antigen-positive cells (○)
2. add excess antigen-negative cells (○)
3. add phage library containing specific (●) and non-specific (○) binders
4. incubate

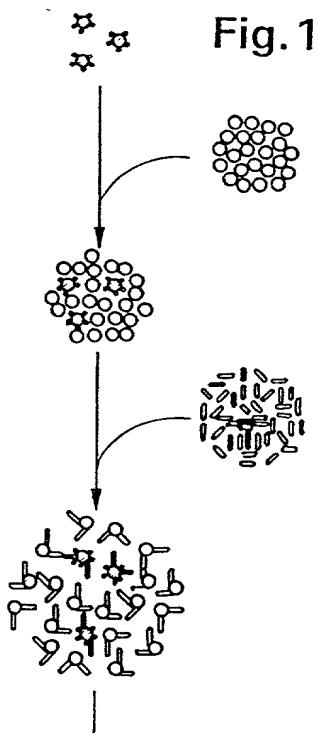
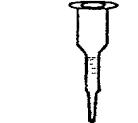
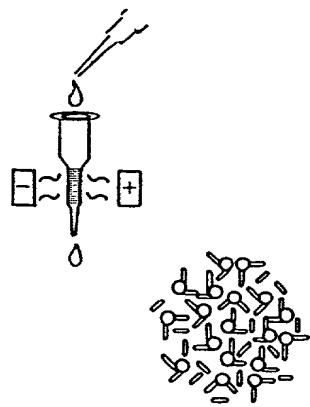


Fig. 1

5. load on column without magnetic field



6. place column in magnetic field and wash away antigen-negative cells and non-specific phage



7. flush antigen-positive cells and bound phage from column, elute bound phage, infect bacterial culture



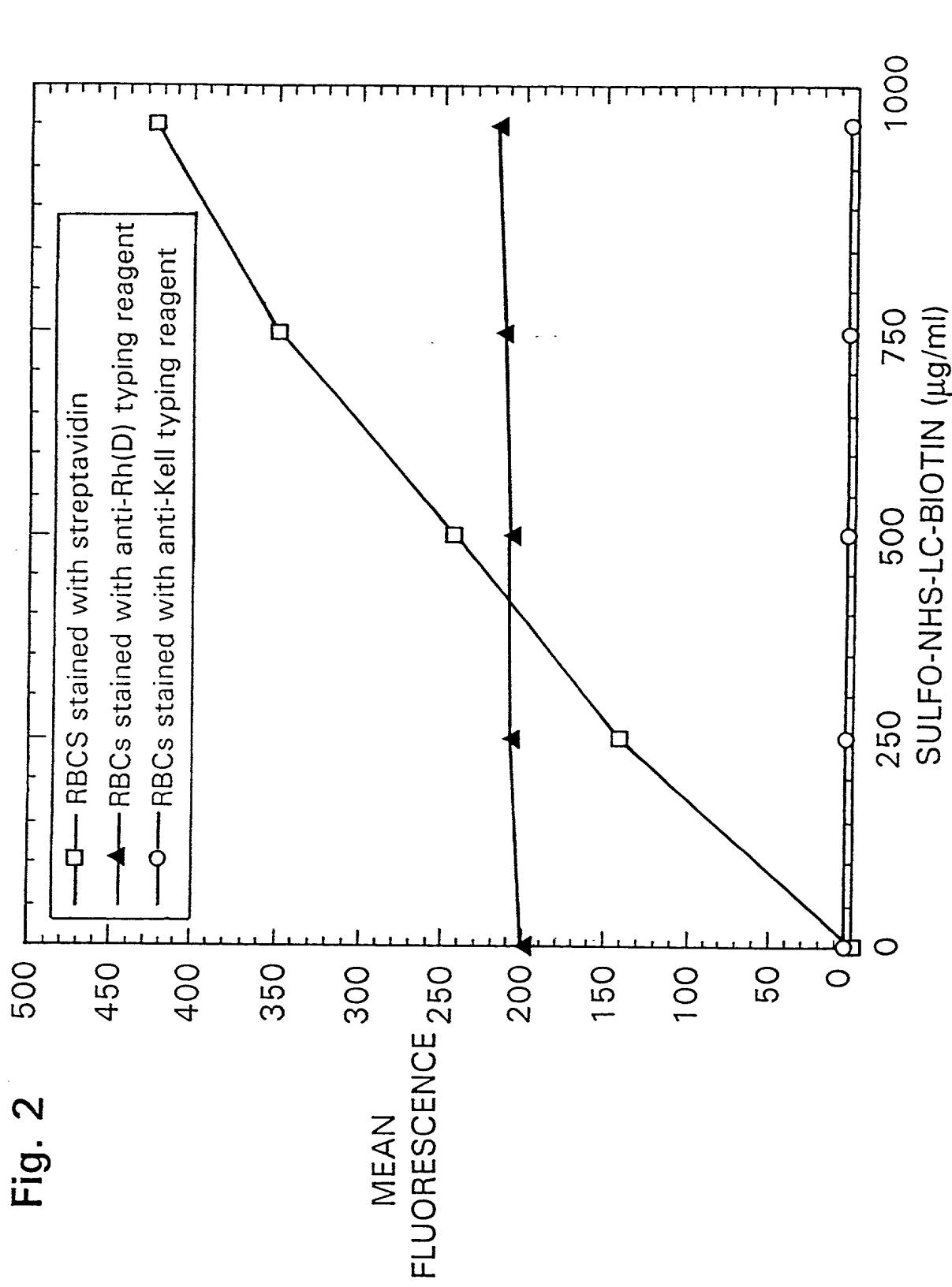


Figure 3a ^{3/42}

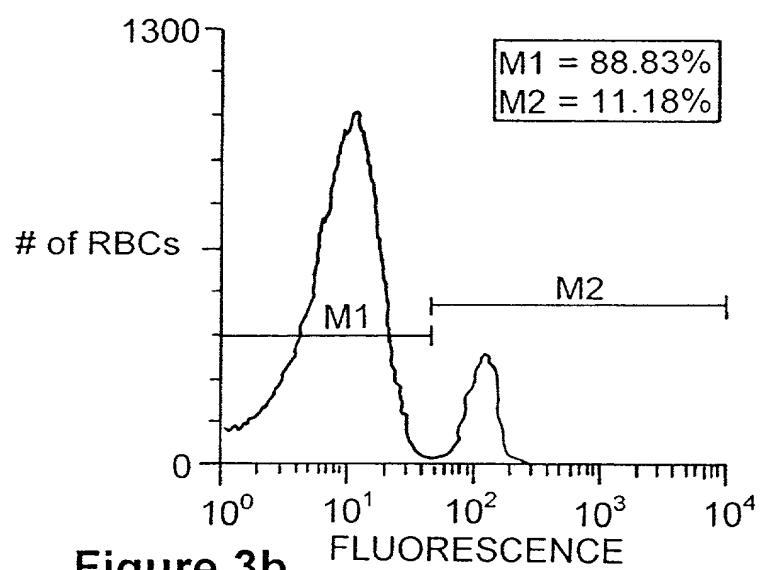


Figure 3b

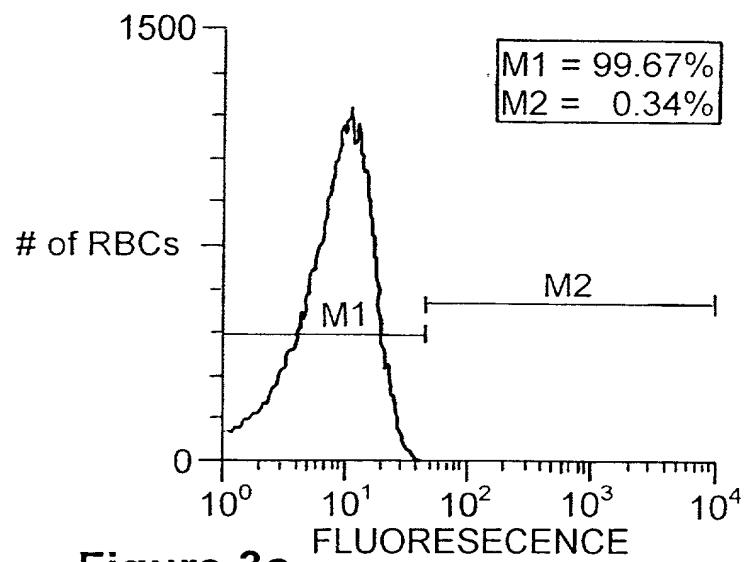
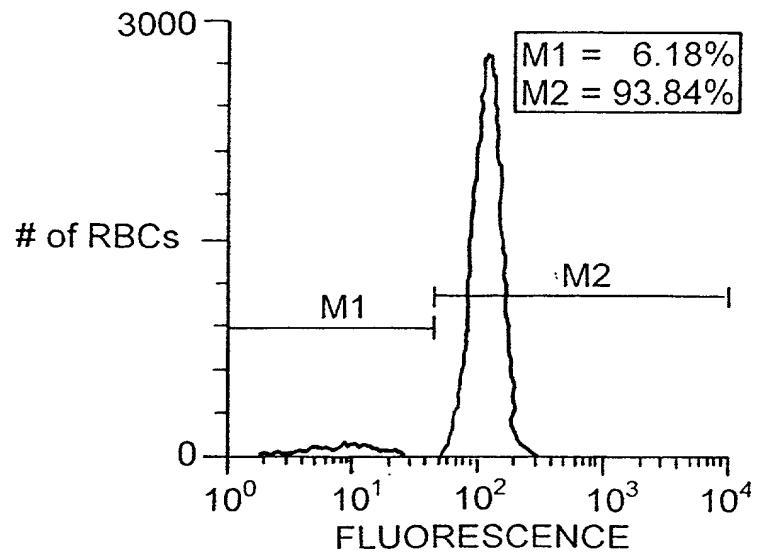


Figure 3c



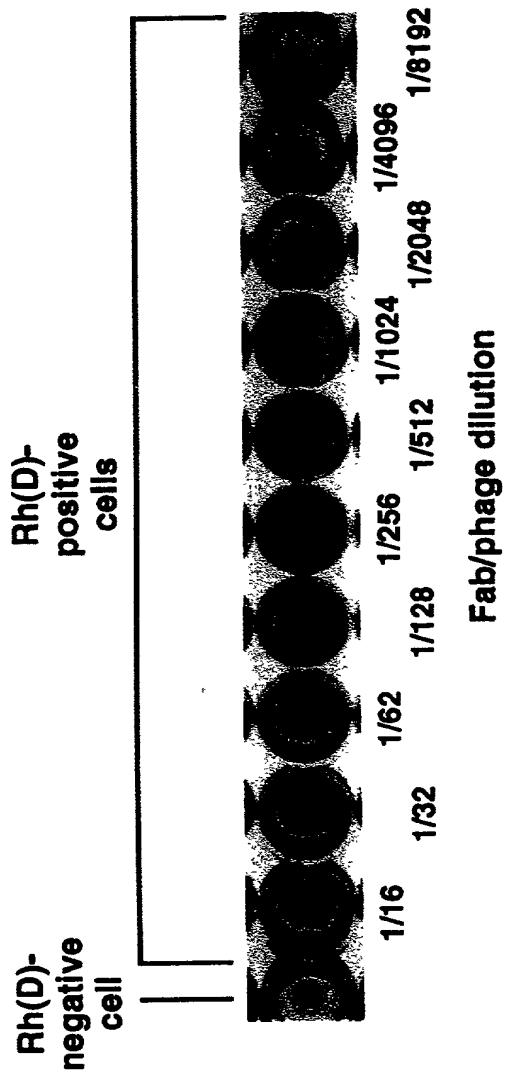


FIG. 4

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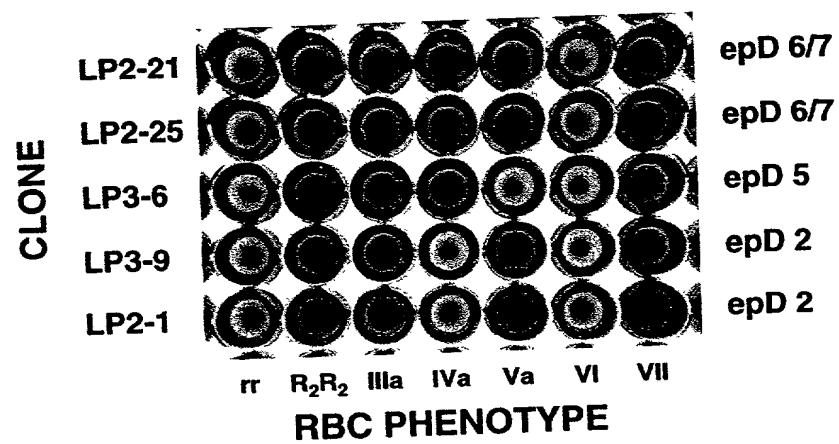


FIG. 5

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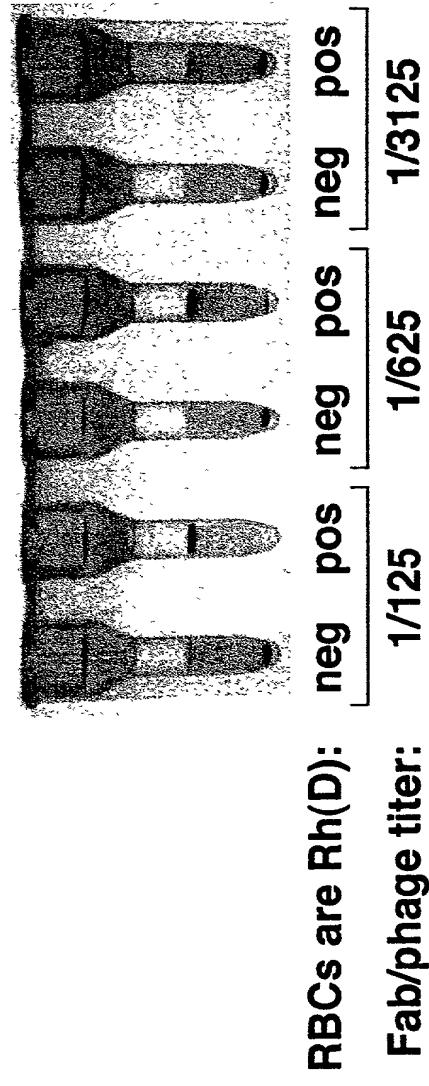


FIG. 6

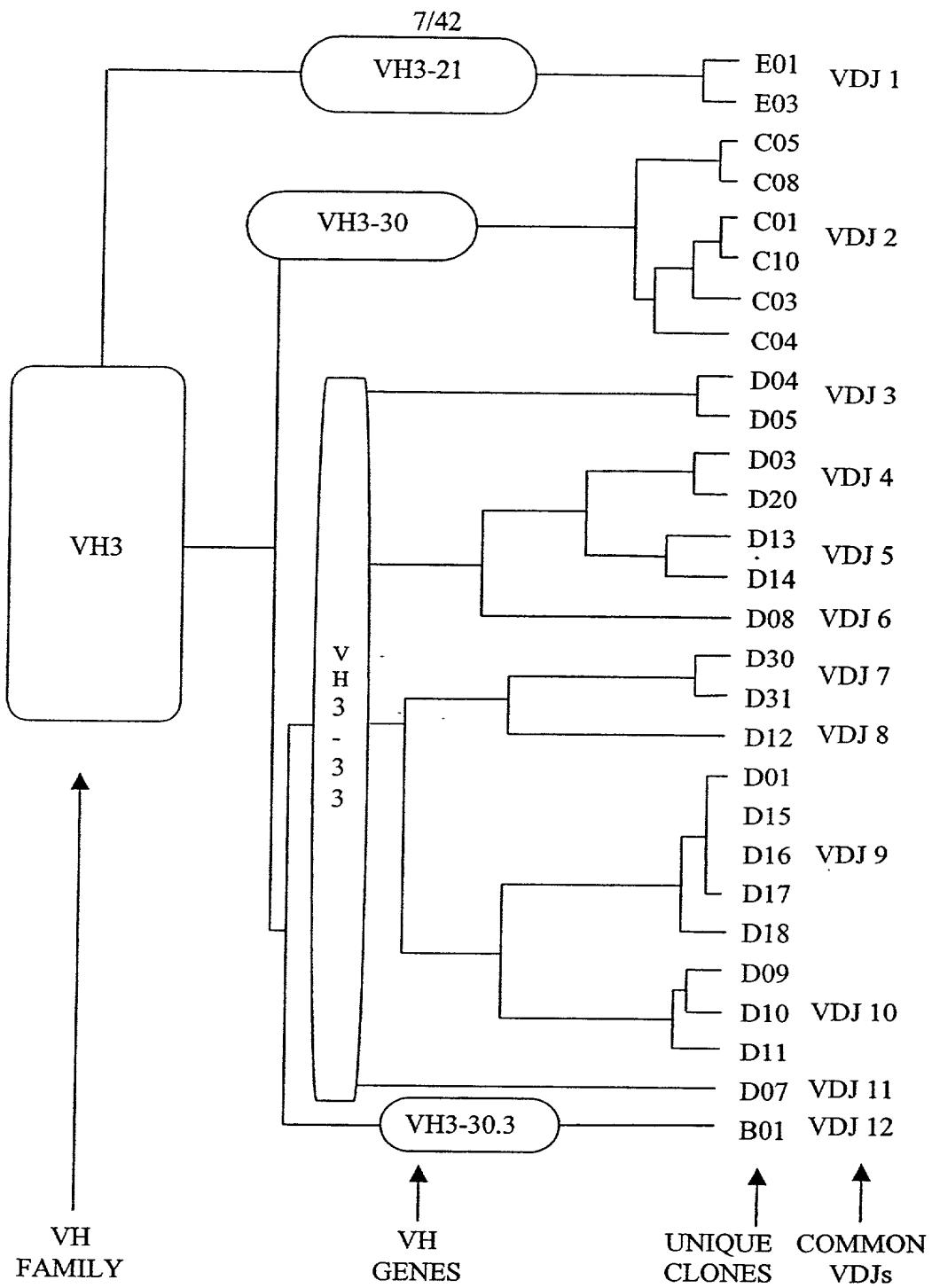
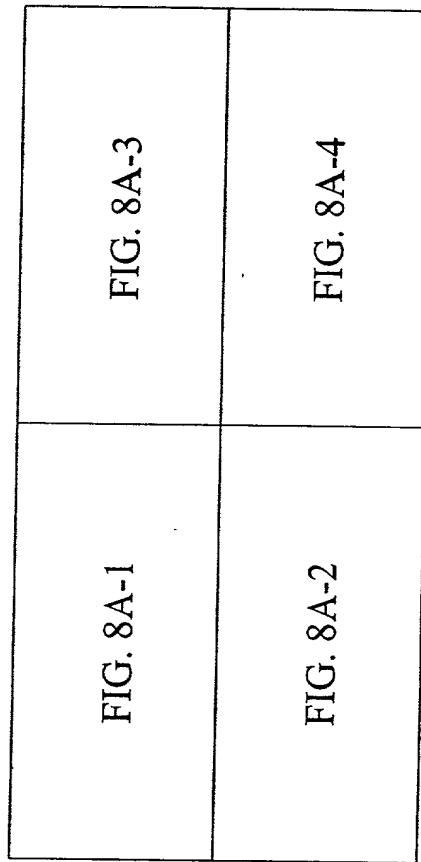


FIG. 7A

CAR DSRYSNFLRWVR-SDGMDV WGQG E01
CAR DSRYSNFLRWVR-SDGMDV WGQG E03
CAN LRGEVTRRASVP----LDI WGQG C05
CAN LRGEVTRRASVP----LDI WGQG C08
CAN LRGEVTRRASVP----FDI WGPG C01
CAN LRGEVTRRASVP----FDI WGPG C10
CAN LRGEVTRRASVP----FDI WGPG C03
CAN LRGEVTRRASIP----FDI WGQG C04
CAR DWR-VRAFS-SGWLSAFDI WGQG D04
CAR DWR-VRAFS-SGWLSAFDI WGQG D05
CAR EEV-VR--GVILWSRKFDY WGQG D03
CAR EEV-VR--GVILWSRKFDY WGQG D20
CAR ENV-ARGGGGVRYKYYFDY WGQG D13
CAR ENV-ARGGGGIRYKYYFDY WGQG D14
CAR DQ---RAAAGIFYYSRMDV WGQG D08
CAR ERN-FR-SGYSRYYGMDV WGPG D30
CAR ERN-FR-SGYSRYYGMDV WGPG D31
CAR EAS-ML-RGISRYYAMDV WGPG D12
CAR ENQ-IK-L-WSRYLYYFDY WGQG D01
CAR ENQ-IK-L-WSRYLYYFDY WGQG D15
CAR ENQ-IK-L-WSRYLYYFDY WGQG D16
CAR ENQ-IK-L-WSRYLYYFDY WGQG D17
CAR ENQ-IK-L-WSRYLYYFDY WGQG D18
CAR EGS-KK-VALSRYYYYMDV WGQG D09
CAR EVS-KK-VALSRYYYYMDV WGQG D10
CAR EVS-KK-LALSRYYYYMDV WGQG D11
CAR ERR-EK--VYILFYSWLDR WGQG D07
CAR GGFYYDSSGYGLRHYFDS WGQG B01

FIG. 7B

FIG. 8A



VH	D	JH	H1			H2		
			FR1	CDR1	FR2	CDR1	FR2	CDR2
3-21	DA4	JH6B	123456789012345678901234567890	1AB2345	678901234567890	012ABC3456789012345	5678901234567890	67890123456789012345
VDJ1	E01		EVQLVESGGGLVPGGSLRLSCAASGFTFS	S--YSMN	WVRQAPGKGLEWVS	SISS--SSYYIYYADSVVKG		
	E03		>>>>>		H		N--NT	A--A
			>>>>>		H	G	N--NT	A--A
3-30	DN4	JH3B	QVQLVESGGVVQPGRSRLSCAASGFTFS	S--YGMH	WVRQAPGKGLEWVA	VISY--DGSNKYYADSVVKG		
VDJ2	CA		>>>>>					
	C05		>>>>>					
	C08		>>>>>					
	CB		>>>>>					
	C01		>>>>>					
	C10		>>>>>					
	C03		>>>>>*	H	*			
3-33	DN1	JH3B	QVQLVESGGVVQPGRSRLSCAASGFTFS	S--YGMH	WVRQAPGKGLEWVA	VIVY--DGSNKYYADSVVKG		
VDJ3	D04		>>>>>A	V	SLR	*	D	F--D
	D05		>>>>>A	V	SLR	*	D	F--D
3-33	DXP'1	JH4B	QVQLVESGGVVQPGRSRLSCAASGFTFS	S--YGMH	WVRQAPGKGLEWVA	VIVY--DGSNKYYADSVVKG		
VDJ4	D20		>>>>>					
	D03		>>>>>					
3-33	?D	JH4B	QVQLVESGGVVQPGRSRLSCAASGFTFS	S--YGMH	WVRQAPGKGLEWVA	VIVY--DGSNKYYADSVVKG		
VDJ5	DA		>>>>>					
	D13		>>>>>L*	G				
	D14		>>>>>L*	G				

FIG. 8A-1

3-33 DNI JH6B QVQLVESGGVVQPGRSRLSCAASGFTFS S--YGMH WVRQAPGKGLEWVA VIWY--DGSNKYYADSVKG
VDJ6 D08 >>>>>...*....R...* L...*...G* .E....*

3-33 DXP4 JH6B QVQLVESGGVVQPGRSRLSCAASGFTFS S--YGMH WVRQAPGKGLEWVA VIWY--DGSNKYYADSVKG
VDJ7 D31 >>>>>...*....R...*...VY...*..H..S....
D30 >>>>>...*....R...*....VY...*..H..S....

3-33 DXP'1 JH6B QVQLVESGGVVQPGRSRLSCAASGFTFS S--YGMH WVRQAPGKGLEWVA VIWY--DGSNKYYADSVKG
VDJ8 D12 >>>>>...A....S.R...*....R...*...FT.F...*..V....

3-33 DK4 JH4B QVQLVESGGVVQPGRSRLSCAASGFTFS S--YGMH WVRQAPGKGLEWVA VIWY--DGSNKYYADSVKG
VDJ9 D15 >>>>>...VV...N N--...* F-...
D16 >>>>>...VV.*N N--...* F-...
D01 >>>>>...VV.*N N--...* F-...
DB >>>>>...VV.*N N--...* F-...
D17 >>>>>...VV.*N N--...* F-...
D18 >>>>>...VV.*N N--...* S...*....* F-...

3-33 DNI JH6B QVQLVESGGVVQPGRSRLSCAASGFTFS S--YGMH WVRQAPGKGLEWVA VIWY--DGSNKYYADSVKG
VDJ10 DC >>>>>...E..K..LY N--...F..F--...
D10 >>>>>...E..K..LY N--...F..F--...E...
D09 >>>>>...E..K..LY N--...F..F--...E...
D11 >>>>>...E..K..LY N--...E....F..F--...

3-33 ?D JH5B QVQLVESGGVVQPGRSRLSCAASGFTFS S--YGMH WVRQAPGKGLEWVA VIWY--DGSNKYYADSVKG
VDJ11 D07 >>>>>...V....LT N--...HV...--.KTE...*..

3-30.3 ?D JH4B QVQLVESGGVVQPGRSRLSCAASGFTFS S--YAMH WVRQAPGKGLEWVA VISY--DGSNKYYADSVKG
VDJ12 B01 >>>>>...R...*...ATA...*..K....

FIG. 8A-2

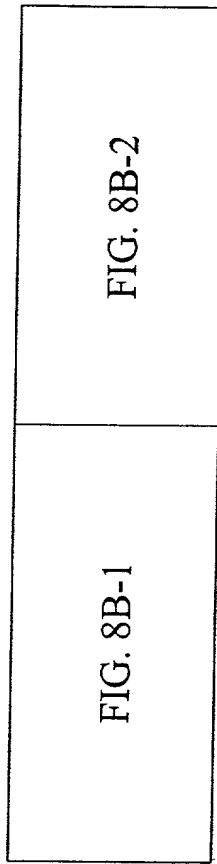
	H3	CDR3	FR4	# NUCLEOTIDE DIFFERENCES FROM GERMINE VH
FR3	7. 8. 9. 10.	K. P. F. F.	N. LRGEVTRAS. -VP.	11.
	67890123456789012abc345678901234	567890abccdefghijk12	34567890123	
RFT1SRDNNAKNSLYLQMNSLRAEDTAVYYCAR	+DYSNY++YYYYGGMDV	WGQGTLVTVSS		
*	*	DSRYSNFLR-WVRSR.	DSRYSNFLR-WVRSR.	6
	H. *			8
RFT1SRDNSKNTLYLQMNSLRAEDTAVYYCAK	++SIARR+++++DAFDI	WGQGTMVTVSS		
*	K. T. P. P.	N. LRGEVTRAS. -VP.	3	
	K. T. P. F. F.	F. LRGEVTRAS. -VPL.		
RFT1SRDNSKNTLYLQMNSLRAEDTAVYYCAR	+DYSNY++YYYYGGMDV	WGQGTLVTVSS		
*	*	DSRYSNFLR-WVRSR.	DSRYSNFLR-WVRSR.	10
	H. *			10
RFT1SRDNSKNTLYLQMNSLRAEDTAVYYCAK	++SIARR+++++DAFDI	WGQGTMVTVSS		
*	K. T. P. P.	N. LRGEVTRAS. -VP.	9	
	K. * P. P.	N. LRGEVTRAS. -IP.		
RFT1SRDNSKNTLYLQMNSLRAEDTAVYYCAK	+DYSNY++YYYYGGMDV	WGQGTMVTVSS		
*	K. * P. P.	P. LRGEVTRAS. -VP.	10	
	K. * P. P.	N. LRGEVTRAS. -VP.		
RFT1SRDNSKNTLYLQMNSLRAEDTAVYYCAK	+DYSNY++YYYYGGMDV	WGQGTMVTVSS		
*	K. * P. P.	P. LRGEVTRAS. -VP.	11	
	K. * P. P.	N. LRGEVTRAS. -VP.		
RFT1SRDNSKNTLYLQMNSLRAEDTAVYYCAK	+DYSNY++YYYYGGMDV	WGQGTMVTVSS		
*	K. * P. P.	P. LRGEVTRAS. -VP.	11	
	K. * P. P.	N. LRGEVTRAS. -VP.		
RFT1SRDNSKNTLYLQMNSLRAEDTAVYYCAK	+DYSNY++YYYYGGMDV	WGQGTMVTVSS		
*	K. * P. P.	P. LRGEVTRAS. -VP.	11	
	K. * P. P.	N. LRGEVTRAS. -VP.		
RFT1SRDNSKNTLYLQMNSLRAEDTAVYYCAK	+DYSNY++YYYYGGMDV	WGQGTMVTVSS		
*	K. * P. P.	P. LRGEVTRAS. -VP.	14	
	K. * P. P.	N. LRGEVTRAS. -VP.		
RFT1SRDNSKNTLYLQMNSLRAEDTAVYYCAK	+DYSNY++YYYYGGMDV	WGQGTMVTVSS		
*	K. * P. P.	P. LRGEVTRAS. -VP.	13	
	K. * P. P.	N. LRGEVTRAS. -VP.		
RFT1SRDNSKNTLYLQMNSLRAEDTAVYYCAK	+DYSNY++YYYYGGMDV	WGQGTMVTVSS		
*	K. * P. P.	P. LRGEVTRAS. -VP.	13	
	K. * P. P.	N. LRGEVTRAS. -VP.		
RFT1SRDNSKNTLYLQMNSLRAEDTAVYYCAK	+DYSNY++YYYYGGMDV	WGQGTMVTVSS		
*	K. * P. P.	P. LRGEVTRAS. -VP.	8	
	K. * P. P.	N. LRGEVTRAS. -VP.		
RFT1SRDNSKNTLYLQMNSLRAEDTAVYYCAK	+DYSNY++YYYYGGMDV	WGQGTMVTVSS		
*	K. * P. P.	P. LRGEVTRAS. -VP.	11	
	K. * P. P.	N. LRGEVTRAS. -VP.		
RFT1SRDNSKNTLYLQMNSLRAEDTAVYYCAK	+DYSNY++YYYYGGMDV	WGQGTMVTVSS		
*	K. * P. P.	P. LRGEVTRAS. -VP.	13	
	K. * P. P.	N. LRGEVTRAS. -VP.		

FIG. 8A-3

RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR	+GIAAG++YYGGMDV	WGQGTTIVTVSS	15
S...*...*...V...D...*	DQRAAAG--IF*SR...	.....
RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR	YYDFWSGYYYYYYGYMDV	WGQGTTIVTVSS	11
......*...*...D...*	ERNRSGY--SR...P...	.....	12
RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR	+ITMVRGVIIYYYYGYMDV	WGQGTTIVTVSS	14
......*...*...E...V	EASMLRGI--SR...A...P...	.....
RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR	++WIQLWL+++++YFDY	WGQGTLVTVSS	9
......*...*...*	ENQIKLWSRYLY---	.....
RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR	++GYSSSSWYYYYGYMDV	WGQGTTIVTVSS	10
......*...*...*	EVSKK?AL--SR...Y...*	.....	10
RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR	++GYSSSSWYYYYGYMDV	WGQGTTIVTVSS	13
......*...*...*	EVSKKVAL--SR...Y...*	.....	13
RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR	++GYSSSSWYYYYGYMDV	WGQGTLVTVSS	14
......*...*...*	EVSKKLAL--SR...Y...*	.....	14
RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR	++GYSSSSWYYYYGYMDV	WGQGTLVTVSS	23
AV...K...*...F...T...I	ERERKVYILFY---S.L.R	.....
RFTISRDNSKNTLYLQMNSLRAEDTAVYYCAR	++GYSSSSWYYYYGYMDV	WGQGTLVTVSS	8
......*...*...F...F	GGFYDDSSGGYGLRH...S	.....

FIG. 8A-4

FIG. 8B



<u>VH</u>	HOMOLOGY	1	2	3	4
	TO CON.	123456789012345678901234567890	1AB2345	67890123456789	
3-21	85%	E.....L.K..G.....	.....S.N	.....S	
3-30	98	.....	....G..	.....
3-33	98	.....	....G..	.....
3-30.3	99	.....	....A..	.....
CONSENSUS		QVQLVESGGVVQPGRSLLSCAAAGFTFS	S--YGMH	WVRQAPGKGLEWVA	

FIG. 8B-1

5. 6. 7. 8. 9.
 012ABC3456789012345 67890123456789012ABC345678901234
 CHOThIA
 CLASS
 1-3
 S. S--SS.YI. A..S.
 1-3
 ...W. --. K
 1-3
 ...V. --.
 1-3
 VISY--DGSNKYYADSVKG RFTISRDN SKNTLILQMN SLRAEDT AVYYCAR

FIG. 8B-2

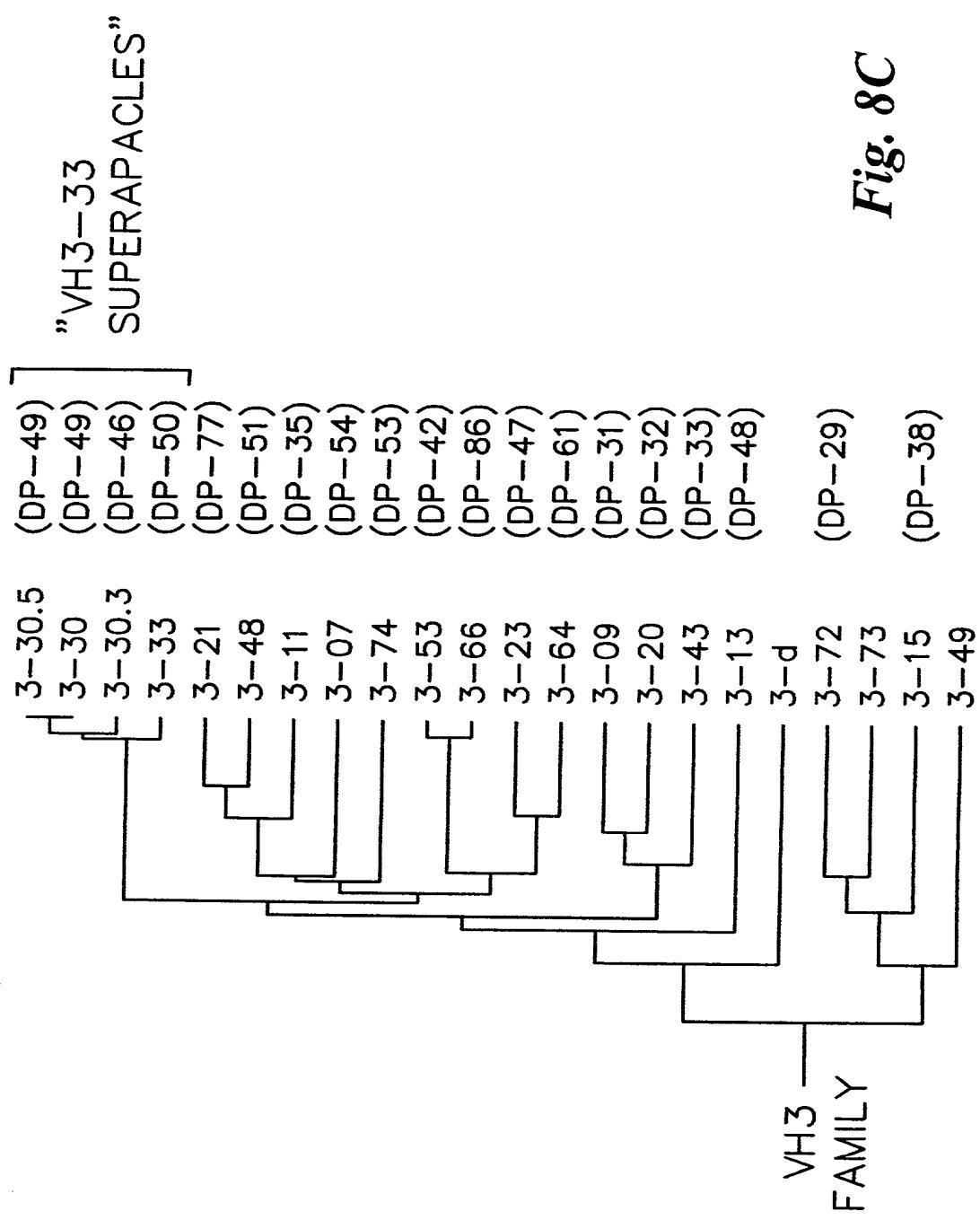


Fig. 8C

FIG. 9

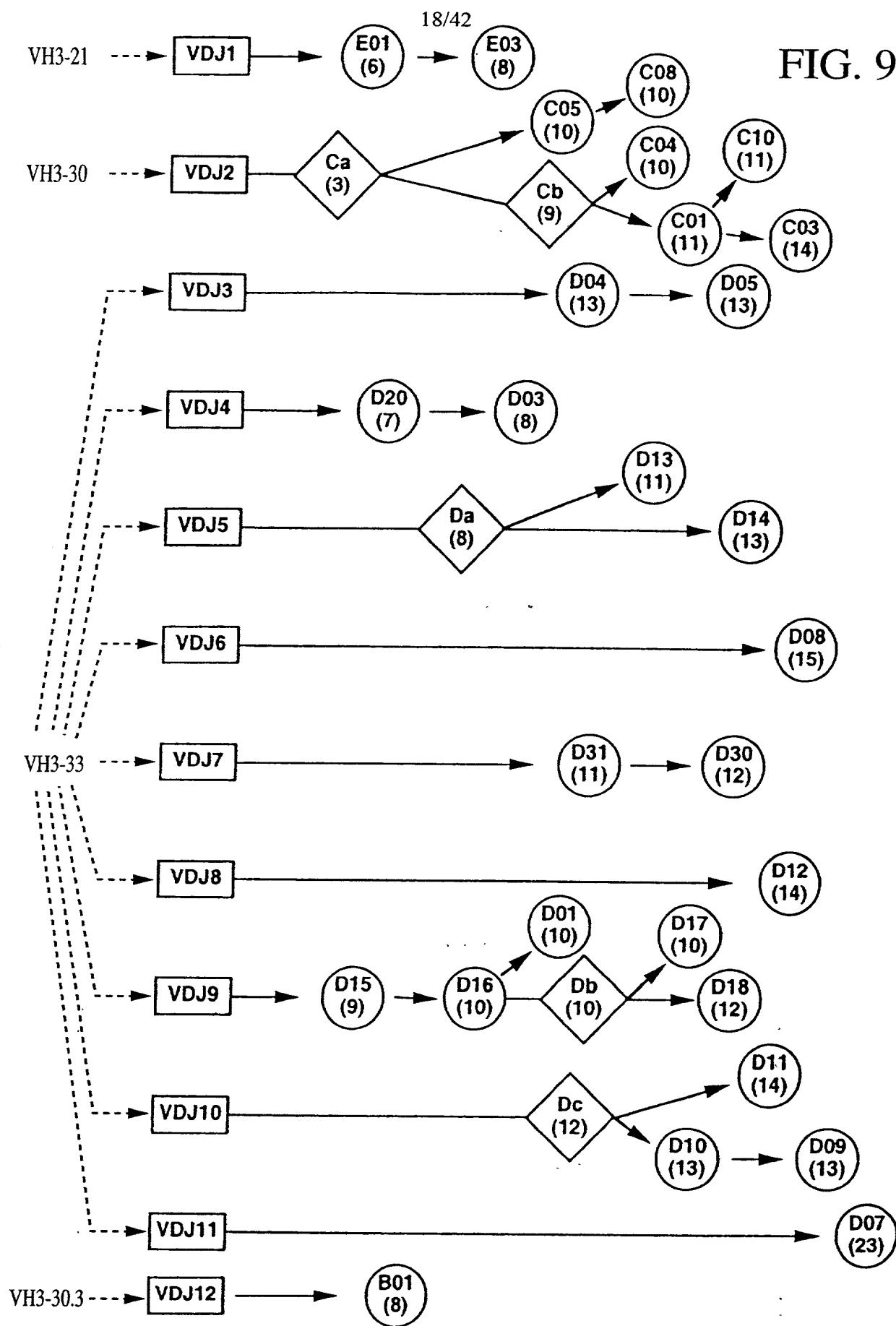


FIG. 10A

FIG. 10A-1	FIG. 10A-3
FIG. 10A-2	FIG. 10A-4

V _k	JK	FR1		FR2		L1		L2	
		CDR1	CDR2	CDR1	CDR2	CDR1	CDR2	CDR1	CDR2
DPK9	JK1	12345678901234567890123	45678901234567890123	45678901234567890123	5678901234567890123	WYQQKPGKAPKLLIY	AASSLQS	WYQQKPGKAPKLLIY	AASSLQS
I05		DIQMTQSPSSLSASVGDRVTITC	RASQSISS-----YLN						
I04		>>>>>	RR						
I15		>>>>>	N.RR	S	*				
I02		>>>>>	N.N.RR	S					
I16		>>>>>*	P	*					
DPK9	JK2	DIQMTQSPSSLSASVGDRVTITC	RASQSISS-----YLN	WYQQKPGKAPKLLIY	AASSLQS				
I12		>>>>>*							
I10		>>>>>							
I13		>>>>>*							
I08		>>>>>E	*						
I09		>>>>>.							
I11		>>>>>.							
DPK9	JK3	DIQMTQSPSSLSASVGDRVTITC	RASQSISS-----YLN	WYQQKPGKAPKLLIY	AASSLQS				
I01		>>>>>*	*	*					
I03		>>>>>.	A	*					
DPK9	JK4	DIQMTQSPSSLSASVGDRVTITC	RASQSISS-----YLN	WYQQKPGKAPKLLIY	AASSLQS				
I07		>>>>>.							

FIG 10A-1

DPK9 I06	JK5	DIQMTQSPSSLSASVGDRVITIC >>>>>	RASQSISS-----YLN WYQQKPGKAPKLLIY AASSLQS *
DPK8 H01	JK3	DIQLTQSPSFLSASVGDRVITIC >>>>>	RASQGISS-----YLA WYQQKPGKAPKLLIY AASTLQS *
A30 F01	JK1	DIQMTQSPSSLSASVGDRVITIC >>>>>	RASQGIRN-----DLG WYQQKPGKAPKRLIY AASSLQS F
DPK15 G01	JK4	DIVMTQSPSLPVTGPASISC >>>>>	RSSSQLIHSNGYN-YLD WYLQKPGQSPQLLIY LGSNRAS S.F.-F

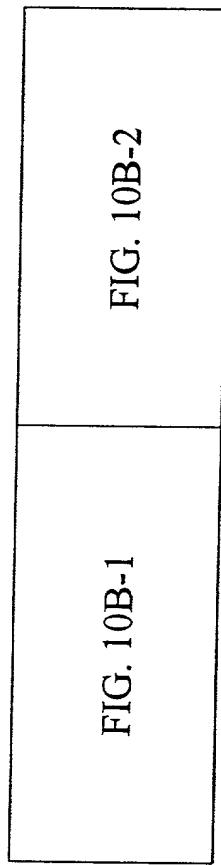
FIG. 10A-2

FIG. 10A-3

GVPSSRFSGSGSGTDFILTISIQLPEDFATYYC	QQSYSTP+IT	FGQGTRLEIK	
.....
GVPSSRFSGSGSGTDFILTISIQLPEDFATYYC	QLNSYP+FT	FGPGTKVVDIK	4
.....
.....	A.....D.....	.....N.*P..	8
.....
GVPSSRFSGSGSGTDFILTISIQLPEDFATYYC	LQHNSYP+WT	FGQGTTKVEIK	
.....
.....	N.....S.....	.....F*.....	8
.....
GVPDRFSGSGSGTDFILTISRVEAEDVGVYYC	MQALQTP+LT	FGGGTTKVEIK	
.....
.....	N.....F.....	.....F.....	8
.....

FIG. 10A-4

FIG. 10B

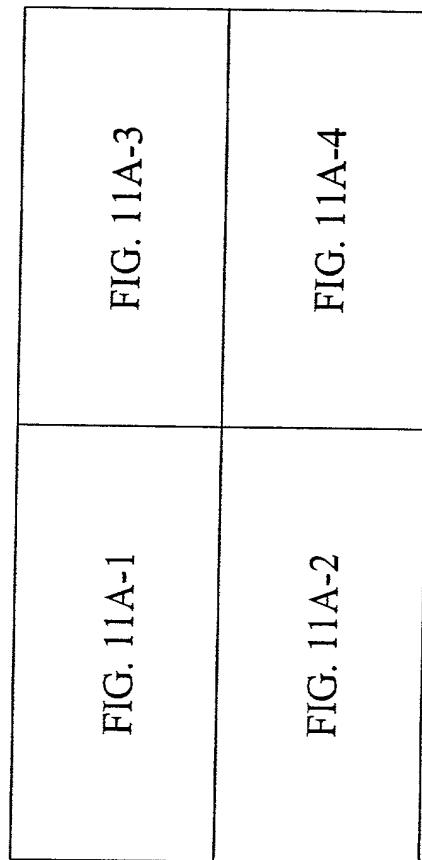


GENE	V _K	FAM.	DIQMTQSPSSLSASVGDRVITTC	RASQSISS-----YLN
DPK9	I	I	...I	...G
DPK8	I	F	...I	...G
A30	I		...I	...G
DPK15	II		...V	...D

FIG. 10B-1

FIG. 10B-2

FIG. 11A



FR2	FR1	CDR1	CDR1	FR2
VA	J _A			
7a.2.3/DPL18	JL2Vasicek			
K01		1234567891234567890123	45678901abc234	567890123456789
K02		QTVVTQEPSTVSPGGTVTLTC	ASSTGAVTSGYYPN	WFQQKPGQQAPRALIY
K03		>>>>>	R.F.	P...
		>>>>>	R.F.	P...
		>>>>>	R.F.	*
2c.118D9+	JL2Vasicek	QSALTQPPSAGSSPGQSVT1SC	TGTSSDVGGYNYVS	WYQQHPGKAPKLMY
R01		>>>>>	A.....A.KH..*
				LTH
DPL10/1v2066	JL2Vasicek	QSALTQPPASVSGSSPGQSVT1SC	TGTSSDVGSYNLVS	WYQQHPGKAPKLMY
S01		>>>>>	.....	.....
DPL7/VL1.2	JL2Vasicek	QSVVTQPPSVSGAPGQRV1SC	TGSSSN1GAGYDVH	WYQQLPGTAFKLLIY
003		>>>>>*	T.....	.....
002		>>>>>	T.....	S...R.....*
001		>>>>>		H.....
				P.G.....F.....V.*
1b.366F5/DPL5	JL2Vasicek	QSVLTQPPSVSAAPGQKV1SC	SGSSSN1GAGYDVH-VS	WYQQLPGTAFKLLIY
N02		>>>>>	.....	.....*
N01		>>>>>	.....	DS*

FIG. 11A-1

1g. 400B5 / DPL3	JL2Vassicek	QSVLTQPPSASGTPGQRTIISC	SGSSSNIGSNN-VY	WYQQQLPGTAPKLLIY
M02		>>>>>	.....	.....-*
M03		>>>>>	.....	.....
M01		>>>>>*	.....	.....
1c. 10.2 / DPL2	JL2Vassicek	QSVLTQPPSASGTPGQRTIISC	SGSSSNIGSNT-VN	WYQQQLPGTAPKLLIY
L05		>>>>>*	L.....	I-.....
L03		>>>>>	.....	*.....N.H-S.....*
L04		>>>>>S	.....	.....M.....*
L01		>>>>>.....	.....	.....S.....*
DPL16 / VL3.1	JL2Vassicek	SSELTQDPAVSVALGQTVRITC	QGDSLR---SYAS	WYQQKPGQAPVILVIY
J02		>>>>>>***
J01		>>>>>>***
J05		>>>>>>K	.....K.....*
J04		>>>>>>>.....	.....	.....F.
3p. 81A4+	JL2Vassicek	SYELTQPPSVSPGQTARITC	SGDALP---KKYAY	WYQQKSGQAPVILVIY
P01		>>>>>A.R***
4b. 68B6	JL2Vassicek	QLVLTQSPSPASASLGASVKLTC	TLS SG--HSSYAI A	WHQQQPEKGPRYLMK
Q01		>>>>>*T.....G	.....*	.....I.Q.*--RN..V*.....H*EAG..*
				F..T

FIG. 11A-2

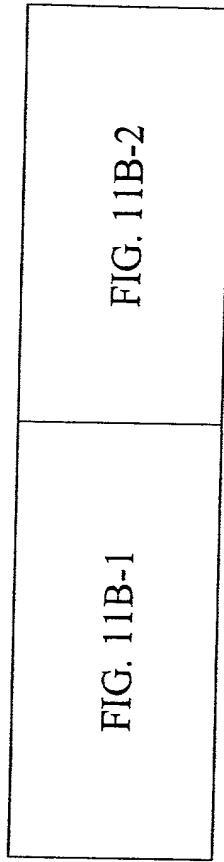
		# nucleotide differences from germline V λ			
		CDR2	FR3	CDR3	FR4
5.....	.....6.....	7.....8.....	.....9.....	10.....	.....
01abcd23456	789012345678ab90123456789012345678	9012345abcddef67	8901234567		
ST-----SNKHS	WTPARESGSLLG--GKAALTLSGVQPEDEAEMYC	LLYYGGAQ+++VV	FGGGTKLTVL		
.....A-----A	.....	.....S.....W.....*	.....*	.....*	7
.....A-----G	.....	.....S.....W.....*	.....*	.....*	7
-----N.....	.....*	.....F.A.....W.....A.....W.....	.....	.....	12
EV-----SKRPS	GVPDRFSGSKSG--NTASLTVSGLQAEDEADYYC	SSYAGSNNF+++VV	FGGGTKLTVL		
.....G-----T	.....	.....F.*NS-----VI	.....	.....	17
EG-----SKRPS	GVSNRFGSKSG--NTASLTISGLQAEDEADYYC	CSYAGSSTF+++VV	FGGGTKLTVL		
.....S.....R	.....H.....	.....I.....-RI	.....	.....	10
GN-----SNRPS	GVPDRFSGSKSG--TSASLAITGLQAEDEADYYC	QSYDSSLSG+++VV	FGGGTKLTVL		
.....H.....	.....E.*.....N.....S--S*F	.....P--Y.....	.....	.....	3
ND-----N.....	.....*R-----*	.....*	.....	.....	10
DN-----NKRPS	GIPDRFSGSKSG--TSATLGITGLQTGDEADYYC	GTWDSSLSA+++VV	FGGGTKLTVL		
.....YR.....*	.....*	.....GRVRRM.....*	.....*	.....	2
.....	.....A.....D.....NG-----R*	.....	.....	.....	15

FIG. 11A-3

RN-----NORPS	GVPDRESSGSKSG--TSASIAISGIRSEDEADYYC	AAWDDSSLSG++VV	FGGGTKLTVL
•-----•-----•	•-----•-----•	•-----•-----•	•-----W*
•-----•-----•	•-----•-----•	•-----•-----•	•-----•-----•
•-----•-----•	•-----•-----•	•-----•-----•	•-----•-----•
N.-----*.*.*	L.-----A.-----N.-----D.-----	A.-----A.-----A.-----	*-----*-----*
SN-----NQRPS	GVPDRESSGSKSG--TSASLAISGLQSEDEADYYC	AAWDDSSLNG++VV	FGGGTKLTVL
•-----K.-----	•-----•-----•	•-----•-----•	*-----T-----R*
*-----G.-----	•-----•-----•	•-----•-----•	•-----•-----•
T.-----G..*	*-----S.-----R* A.D.-----	*-----H.-----P*	*-----•-----*
•-----•-----•	•-----T.V.T.-----TG*.*.GT	•-----T.-----T.-----	•-----*-----*
GK-----NNRPS	GIPDRFSGSSSG--NTASLTITGAQAEDEADYYC	NSRDSSGNH++VV	FGGGTKLTVL
•R-----•-----	*---Q..A.-----T.-----*	Q.*AT*..P-----*	*-----*-----*
•R-----•-----	*---Q..A.-----T.-----*	Q.*AT*..P-----*	*-----*-----*
AR----*S.-----	N.----T.-----A..R.-----	H.---N.H.----R*	•-----•-----*
•-----S.-----	•-----*-----*-----*	S*.G.PH-----A	•-----*-----*
ED-----SKRPS	GIPERFSGSSSG--TMAITLTISGAQVEDEADYYC	YSTDSSGNH++VV	FGGGTKLTVL
*.-----K...P	*.T.----.S.-----*	*.R.N..DQ---RR*	..A.-----
LNSDGSHSKGD	GIPDRFSGSSSG--AERYLTISSLQSEDEADYYC	QTWGTGI++VV	FGGGTKLTVL
VTN..R.I...	A.----*...S..G..*	M-----H*	•-----*-----*

FIG. 11A-4

FIG. 11B

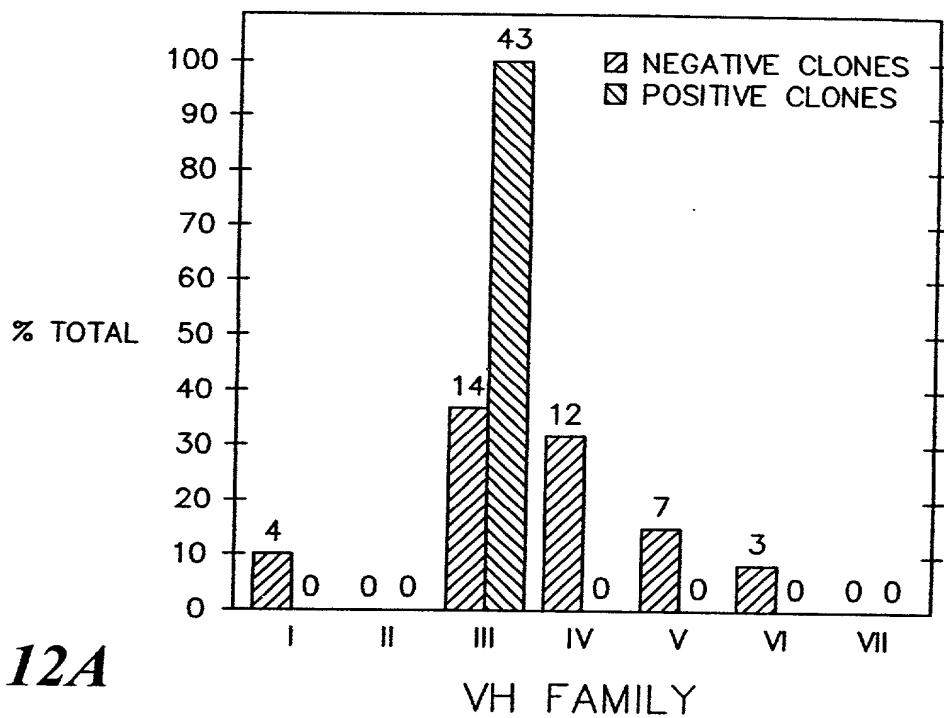
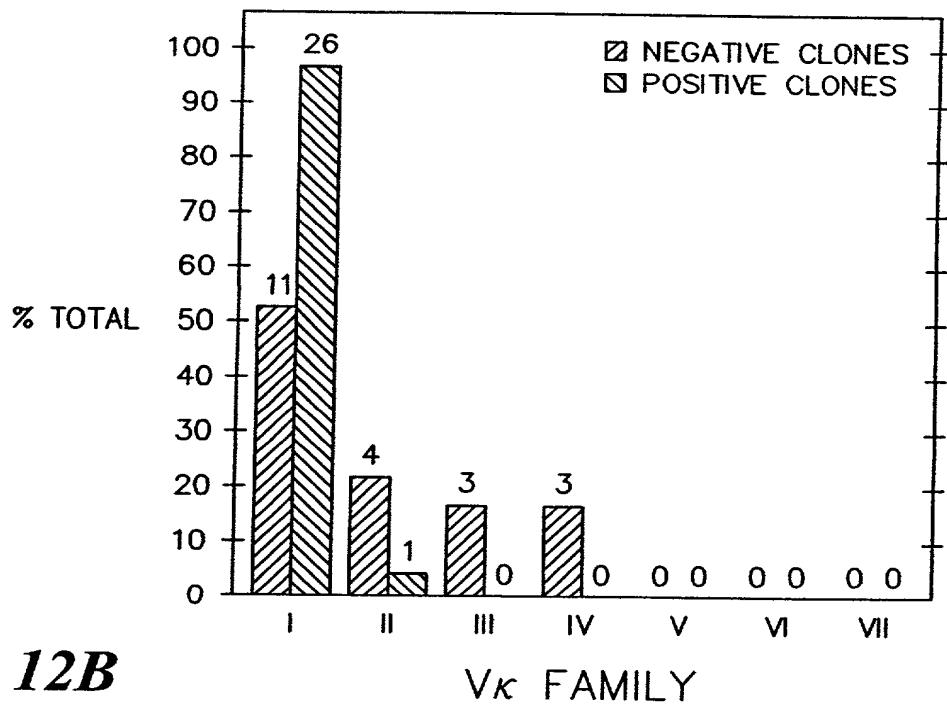


V λ	GENE	FAM.	Sequence
	7a.2.3/DPL18	VII	QTVVVTQEPQLTVSPGGTVTLTC
	2c.118D9+	II	QSALTQPPSASGSPQQSVTISC
	DPL10/1v2066	II	QSALTQPPASVSGSPGQSQITISC
	DPL7/VL1.2	I	QSVVVTQPPSVSGAPGQRVTISC
	1b.366F5/DPL5	I	QSVVLTQPPSVSAAPGQKVVTISC
	1g.400B5/DPL3	I	QSVVLTQPPSASGTPGQRVTISC
	1c.10.2/DPL2	I	QSVVLTQPPSASGTPGQRVTISC
	DPL16/VL3.1	III	SSELTQDPAVSVALGQTVRITC
	3p.81A4+	III	SYELTQPPSVSPGQTARITC
	4b.68B6	IV	QLVLTQSPSASASLGASVKLTC
			TLSSG--HSSYAI

FIG. 11B-1

WFQQKPGQAPRALIY	ST-----SNKHS	WTPARESGSLLG--GKAALTLSGVQPEDEAYYYC	LLYYGGAQ
WYQQHPGKAPKLMIY	EV-----SKRPS	GVPDRFSGSKSG--NTASLTITVSGLOAEDADYYC	SSYAGSNNF
WYQQHPGKAPKLMIY	EG-----SKRPS	GVSNRFSGSKSG--NTASLTISGLQAEDADYYC	CSYAGSSTF
WYQQQLPGTAPKLLIY	GN-----SNRPS	GVPDRFSGSKSG--TSASLAITGLQAEDADYYC	QSYDSSLSG
WYQQQLPGTAPKLLIY	DN-----NKRPS	GIPDRFSGSKSG--TSATLGITGLQQTGDEADYYC	GTWDDSSLSA
WYQQQLPGTAPKLLIY	RN-----NQRPS	GVPDRFSGSKSG--TSASLAISSLRSEDEADYYC	AAWDDDSLNG
WYQQQLPGTAPKLLIY	SN-----NQRPS	GVPDRFSGSKSG--TSASLAISSLQSEDADYYC	AAWDDDSLNG
WYQQKPGQAPVLVIY	GK-----NNRPS	GIPDRFSGSSSG--NTASLTITGAQQAEDADYYC	NSRDSSGNH
WYQQKSGQAPVLVIY	ED-----SKRPS	GIPERFSGSSSG--TMATLTISGAQVEDADYYC	YSTDSSGNH
WQQQPEKGPRYLMK	LNS-DGSHSKGD	GIPDRFSGSSSG--AERYLTISLQSEDADYYC	QTWGTGCI

FIG. 11B-2

**Fig. 12A****Fig. 12B**

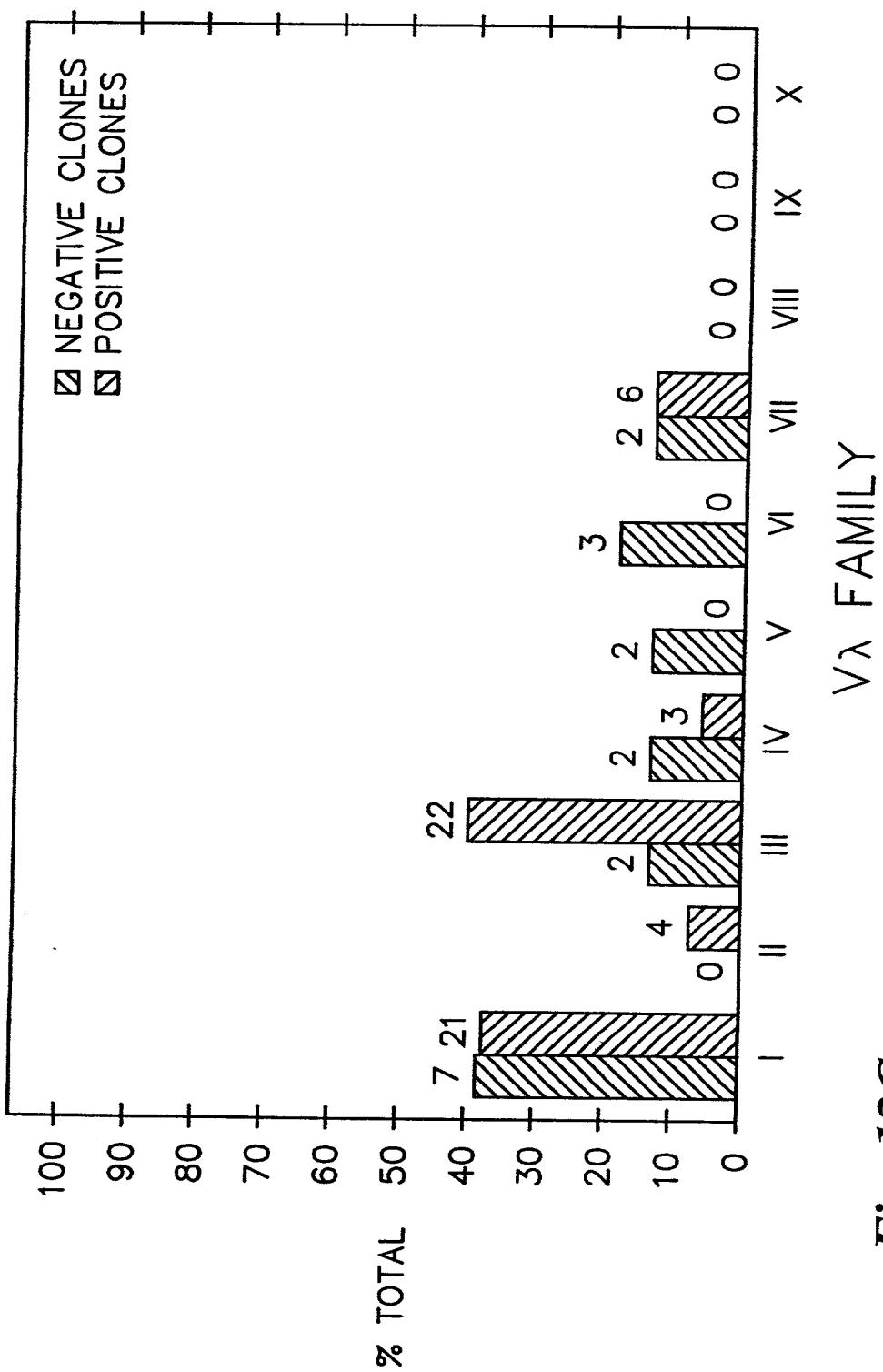


Fig. 12C

CLONE (HC/LC)	Rh(D)VARIANT CATEGORY	ASSIGNED EPITOPE
	IIIc IVa IVb Va VI VII	
E1/L4		epD1
E1/M2		epD2
E1/M3		epD3
D20/K3		epD6/7
D7/J4		"epDX"

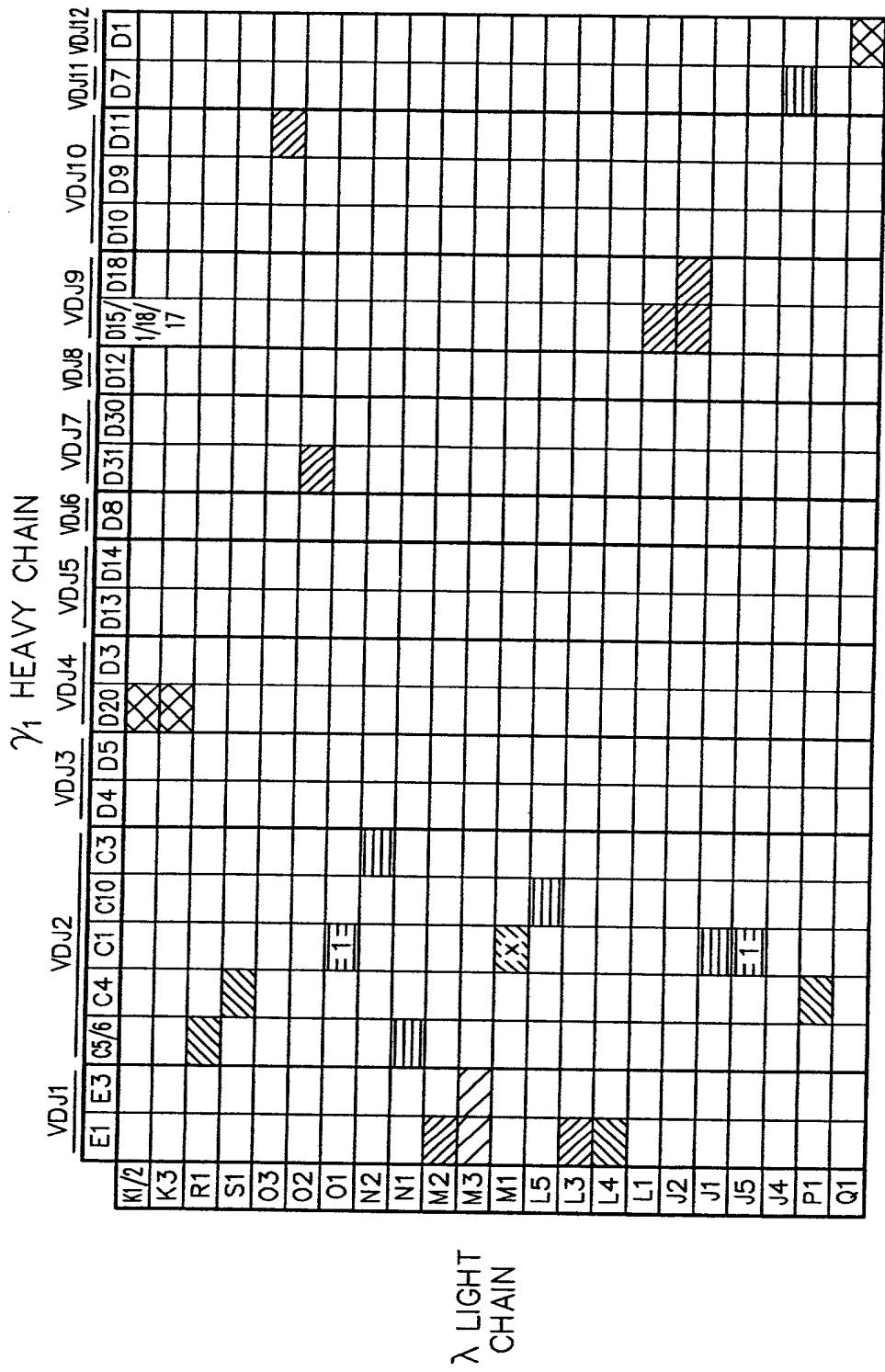


Fig. 14A

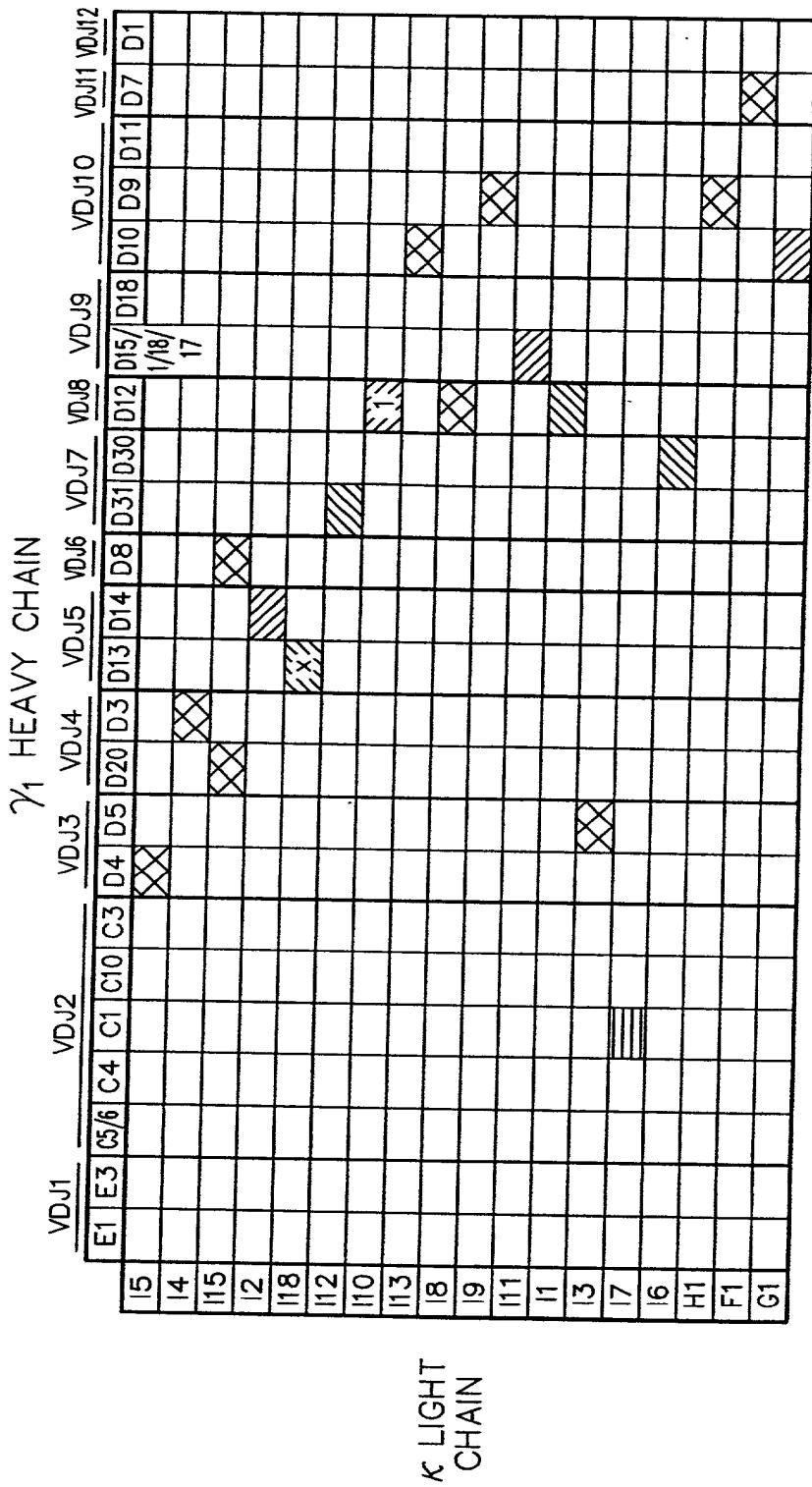


Fig. 14B

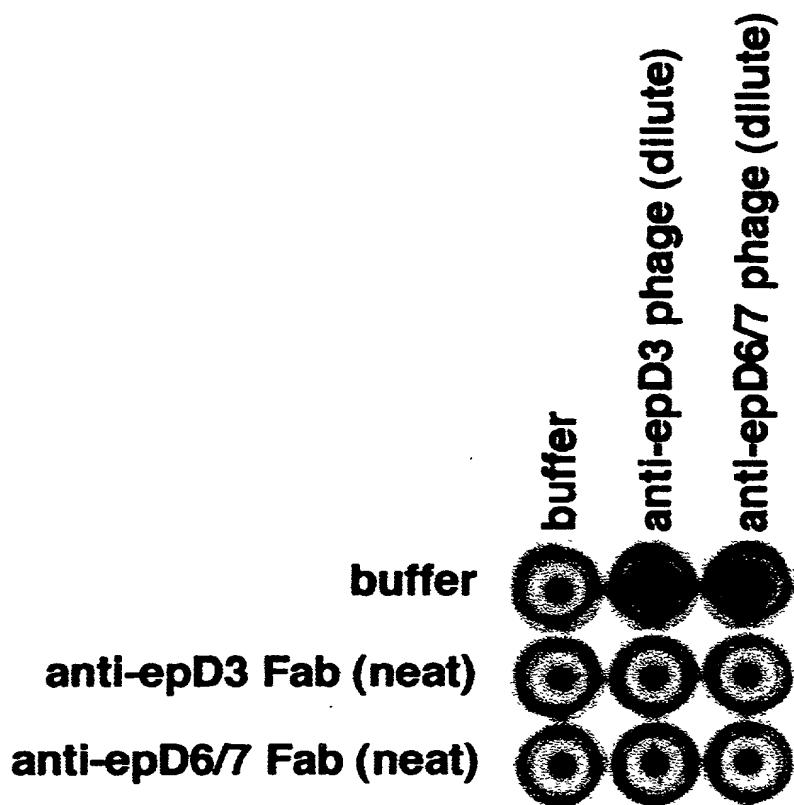


FIG. 15A

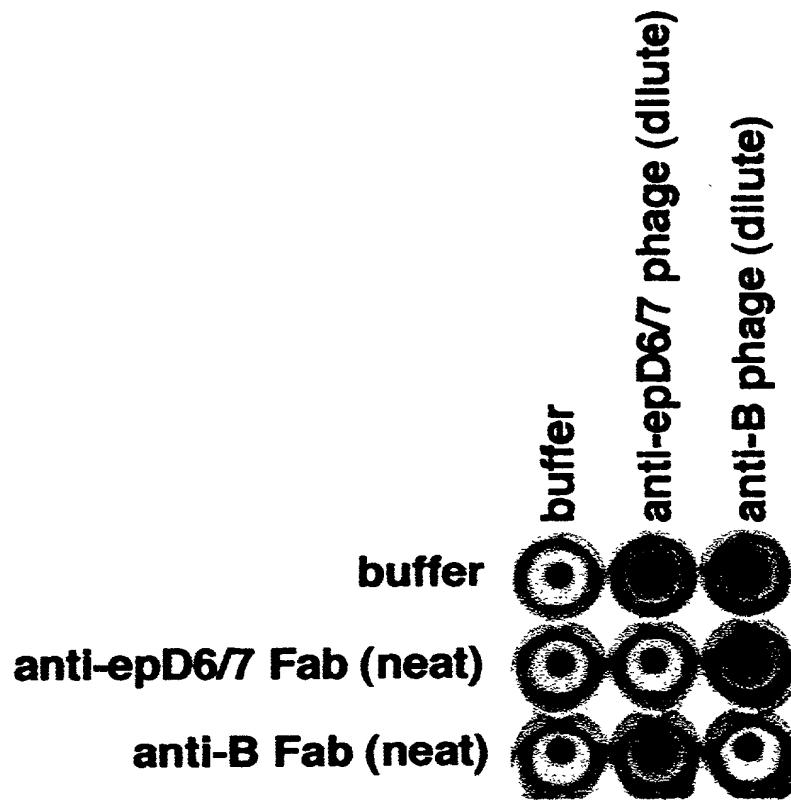


FIG. 15B

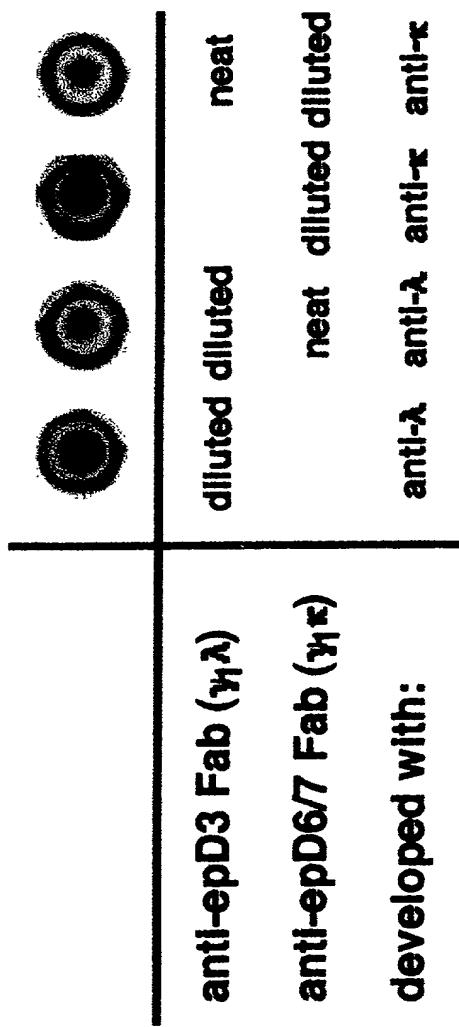
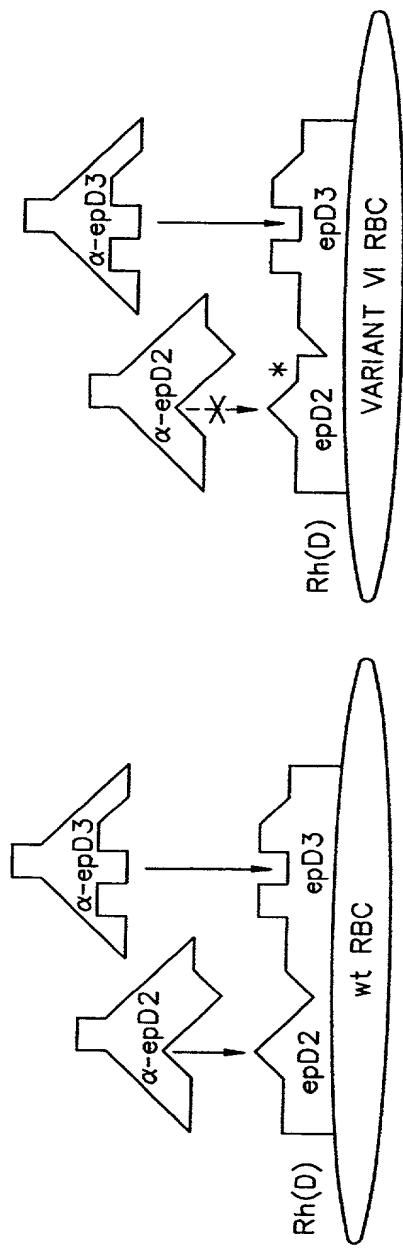
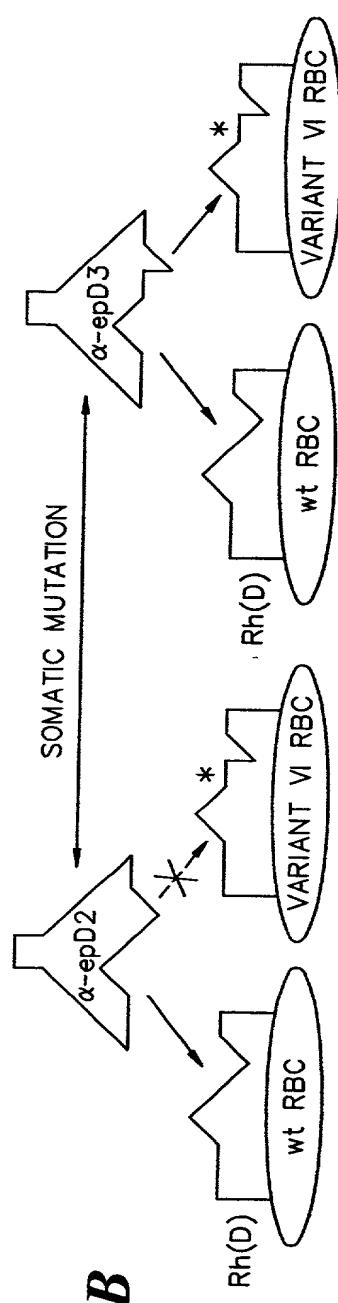
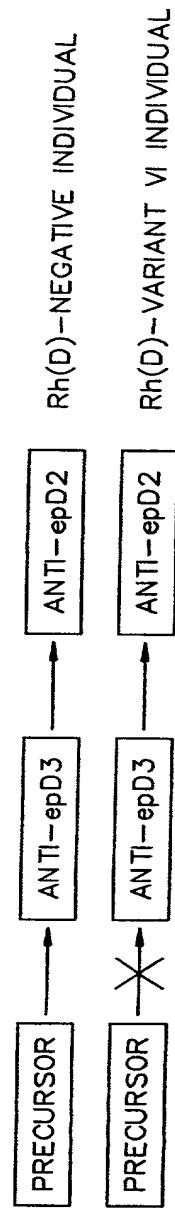


FIG. 15C

**Fig. 16A****Fig. 16B****Fig. 16C**